A COAL TAR-EPOXY REINFORCED CONCRETE PRODUCT/SYSTEM COMPOSITE PIPE STRUCTURE

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ABSTRACT

Extensive uses of coal tar-epoxies in protection of steel have been documented and reported in the technical literature. New and important uses of this resin system in protection of other materials of construction are reported. This paper presents a coal tar-epoxy product/system for protection of concrete sewer pipe lines subjected to corrosive attack. The materials engineering system consisting of coal tar-epoxy resin with reinforced concrete, and the unique method of manufacturing resulting in a composite pipe structure, are discussed. Mechanics of corrosion of concrete sewers and remedial measures are explained. Laboratory, environmental, and field chemical resistance studies, as well as physical properties, and beneficial effects of the coal tar-epoxy product/system on the structural behavior and design of circular reinforced concrete pipes, are presented.